

CLAIMS

I claim:

1. A genomic profile information system accessible over a communications network, the genomic profile information system comprising:
5 data for a plurality of participants indicating genomic profile information of the participants; and
a software system comprising privacy settings for at least one of the participants and controlling access by others over the communications network to genomic profile information of the participant, wherein the participant controls the privacy settings for the participant, and the privacy settings for the participant can be
10 configured by the participant over the communications network.
2. The genomic profile information system of claim 1 wherein the software system enforces confidentiality for the genomic profile information of the
15 participant unless otherwise specified by the participant.
3. The genomic profile information system of claim 1 wherein:
the settings indicate a computer system under a participant's control on which at least some of the participant's genomic profile information resides; and
20 the software system accordingly directs requests for information residing on the computer system under the participant's control to the computer system under the participant's control.
4. The genomic profile information system of claim 3 wherein at least
25 some of the participant's genomic profile information residing on a computer system under the participant's control is provided to another participant via a peer-to-peer network arrangement.
5. The genomic profile information system of claim 1 wherein identity
30 of the participant is authenticated over the communications network via biometric screening.

6. The genomic profile information system of claim 1 wherein the privacy settings comprise separate privacy settings for other participants and for researchers.

5 7. The genomic profile information system of claim 1 wherein the privacy settings comprise separate privacy settings indicating whether medical information of the participant can be accessed by others.

8. The genomic profile information system of claim 1 wherein:
10 the software system indicates whether the participant is a member of one or more groups; and
 the privacy settings comprise separate privacy settings indicating whether group membership information of the participant in the system can be accessed by others.

15 9. The genomic profile information system of claim 1 wherein the privacy settings comprise separate privacy settings indicating whether a primary disease of the participant can be accessed by others.

20 10. The genomic profile information system of claim 1 wherein:
 the settings indicate whether a participant's genomic profile information can be examined by other participants; and
 the software system accordingly allows examination of the participant's genomic profile information by other participants while preserving anonymity of the
25 participant.

11. The genomic profile information system of claim 10 wherein:
the settings indicate one or more participants are members of a group;
the settings indicate whether a participant's genomic profile information can
be examined by other participants who are members of the group; and
5 the software system accordingly allows examination of the participant's
genomic profile information by other participants who are members of the group
while preserving anonymity of the participant.
12. The genomic profile information system of claim 1 further
10 comprising:
software for identifying two or more participants having similar genomic
profile information; wherein the identifying software presents a user interface option
to a participant for contacting another similar participant while maintaining
anonymity of the similar participant.
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13. The genomic profile information system of claim 1 wherein:
the settings comprise an identifier by which a participant can be identified
anonymously; and
the software system accordingly identifies the participant via the identifier.
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14. The genomic profile information system of claim 1 wherein the
settings indicate whether a participant's genomic profile information can be
examined by other participants.
- 25 15. The genomic profile information system of claim 1 wherein the
settings indicate whether a participant's genomic profile information can be
examined on behalf of other participants.
16. The genomic profile information system of claim 1 wherein the
30 settings indicate whether a participant's genomic profile information can be
examined for a comparison at the request of another participant.

17. The genomic profile information system of claim 1 wherein the settings indicate whether a participant's genomic profile information can be distributed.

5 18. The genomic profile information system of claim 1 wherein the settings indicate an organization to which a participant's genomic profile information can be distributed.

10 19. The genomic profile information system of claim 1 wherein a set of participants have a disease condition, and the genomic profile information comprises information indicating the outcomes of such therapies.

15 20. The genomic profile information system of claim 1 wherein the genomic profile information system further comprises comparison tools operable by a researching participant having a disease condition, and the tools identify therapy outcomes for participants having a disease condition and molecular portrait similar to the researching participant.

20 21. The genomic profile information system of claim 1 further comprising:
a comparison tool software system comprising comparison tools for comparing genomic profile information for two or more participants.

25 22. The genomic profile information system of claim 21 wherein the participant is a patient having a disease condition, and the comparison tools support patient-driven comparative analyses of genomic profile information over a communications network.

30 23. The genomic profile information system of claim 21 wherein at least one of the tools compares gene expression.

24. The genomic profile information system of claim 21 wherein at least one of the tools compares drug response information.

25. The genomic profile information system of claim 21 wherein the comparison tools provide comparison results indicating one or more participants, and the participants are listed anonymously in the comparison results.

26. The genomic profile information system of claim 25 wherein at least one of the anonymous listings of the participants can be selected by a computer user interface to send a message to the anonymously-listed participant.

27. The genomic profile information system of claim 1 wherein the genomic profile information comprises genomic pathology information for one or more participants.

28. The system of claim 1 wherein the system has information for over 10,000 participants.

29. The system of claim 1 wherein the system has information for over 100,000 participants.

30. The system of claim 1 wherein the system has information for over 1,000,000 participants.

31. The system of claim 1 wherein the system has information for over 10,000,000 participants.

32. The system of claim 1 wherein the system has information for over 100,000,000 participants.

33. A method comprising:
registering an individual as a participant in a genomic profile information center;

5 collecting personal genomic profile data of the participant;
adding the participant to a genomic profile information database; and
granting the participant custodial control over the participant's genomic profile information.

34. A computer-readable medium comprising computer-executable
10 instructions for performing the method of claim 33.

35. The method of claim 33 wherein custodial control comprises
controlling, via a computer user interface, whether the participant's genomic profile
information is to be provided to others.

15 36. The method of claim 33 wherein custodial control comprises
controlling, via a computer user interface, whether the participant's genomic profile
information is to be provided for use in a particular study.

20 37. The method of claim 33 wherein custodial control comprises
controlling whether other participants being members of a designated group can
access the participant's genomic profile information.

25 38. The method of claim 37 wherein the participant's genomic profile
information is identified anonymously.

39. The method of claim 33 further comprising:
as a result of receiving authorization from the participant to provide the
participant's genomic profile information for use in research, compensating the
30 participant.

40. The method of claim 39 wherein compensation originates from payment by a third party.

41. A method comprising:
5 analyzing a biological sample collected from a patient to generate a genomic profile for the patient;
incorporating the genomic profile for the patient into a genomic profile information collection comprising genomic profile information for a plurality of other patients; and
10 compensating the patient by providing at least some level of access to the genomic profile information collection.

42. The method of claim 41 wherein the genomic profile information collection comprises a network of computers communicating via a peer-to-peer network arrangement.

43. The method of claim 41 wherein incorporating comprises storing a reference to a computer under control of the patient at which genomic profile information for the patient can be accessed.

44. The method of claim 41 wherein the genomic profile for the patient is stored on a computer system under control of the patient and accessed by others by accessing the computer system under control of the patient.

45. The method of claim 41 wherein the genomic profile for the patient is stored on a computer system under control of the patient and access to the genomic profile for the individual is provided by the computer system under control of the patient.

46. A method comprising:
registering an individual as a participant in a genomic profile information network;

5 collecting genomic profile information from the participant, wherein the genomic profile information from the participant comprises gene expression information for one or more genes based on a biological sample taken from the participant;

10 adding the genomic profile information from the participant to a collection of data comprising genomic profile information from other participants, wherein the genomic profile information from the other participants comprises gene expression information for the one or more genes based on biological samples taken from the other participants;

15 comparing the genomic profile information of the participant with that from the other participants to generate comparison results indicating closeness between the participant's genomic profile information and genomic profile information of one or more of the other participants; and

20 presenting the genomic profile information of the one or more other participants, wherein identities of the one or more other participants remain anonymous.

47. The method of claim 46 further comprising:
accepting a selection via a graphical user interface from the participant indicating a message is to be sent to the one or more other participants; and
25 responsive to the selection, sending a message to the one or more other participants.

48. A genomic profile information center granting patients control over their personal genomic profiles.

30 49. A method of operating a genomic profile information center, wherein patients are granted control over their personal genomic profiles.

50. The method of claim 49 comprising:

collecting personal genomic profile information from thousands of remote participants.

5 51. A method of providing a genomic profile information database, wherein participants exercise control over their genomic profile information.

52. A method comprising:

compensating a person in exchange for contributing information to a genomic profile information database.

53. The method of claim 52 wherein proceeds for compensating the person come from sale of the information to an entity requesting the information from an information center.

15 54. The method of claim 52 wherein the information is contributed by providing a personal biological specimen from the person.

55. A method comprising:

20 collecting a biological sample from a person;
performing analysis on the sample to generate personal genomic profile for the person;

pooling the personal genomic profile with personal genomic profiles from other people into a collection of anonymous personal genomic profiles;

25 selling the collection of anonymous pooled personal genomic profiles to a requesting entity for payment; and

as a result of the sale, compensating the person via the payment.

56. A method comprising:
directing a person to supply a biological sample from the person's body to a
laboratory;
receiving an analysis of the biological sample from the laboratory and
5 incorporating the analysis into a personal genomic profile for the person;
pooling the personal genomic profile with personal genomic profiles from
other people into a collection of anonymous personal genomic profiles;
selling the collection of anonymous pooled personal genomic profiles to a
requesting entity for payment; and
10 as a result of the sale, compensating the person via the payment.

57. A method for motivating a person to contribute information to a
genomic profile information database, the method comprising:
compensating the person in exchange for contributing information to the
15 genomic profile information database.

58. A method for motivating a participant to contribute to a genomic
profile information database, the method comprising:
at the direction of the participant, receiving personal genomic profile
20 information of the participant for addition to the database; and
providing monetary compensation to the participant in exchange for
receiving the personal genomic profile information of the participant.

59. A method for motivating a participant to contribute to a genomic profile information database, the method comprising:

receiving personal genomic profile information of the participant for addition to the database;

5 adding the personal genomic profile information to the database;
and

providing comparative genomic analysis to the participant in exchange for receiving the personal genomic profile information of the participant, wherein the comparative genomic analysis comprises comparing the personal genomic profile
10 information to personal genomic profile information for other participants in the database.

60. The method of claim 59 wherein receiving personal genomic profile information of the participant comprises:

15 receiving genotype information of the participant; and
receiving phenotype information of the participant.

61. The method of claim 58, further comprising:

receiving payment for a collection of genomic profile information
20 comprising the individual genomic profile information;
wherein the monetary compensation is derived from the payment.

62. The method of claim 58, further comprising:

combining the individual genomic profile information into a collection of
25 genomic profile information comprising the individual genomic profile information;
and

selling the collection of genomic profile information comprising the individual genomic profile information in exchange for a payment;
wherein the monetary compensation is derived from the payment.

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63. A method comprising:
storing a personal genomic profile for a participant in a database;
designating the participant as a member of a group; and
providing the participant with access to group functions and information.

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64. The method of claim 63 wherein the group functions include
exchanging information with other group members.

65. The method of claim 63 further comprising:
10 limiting members of the group to those interested in acquiring information
about a particular medical condition.

66. The method of claim 63 further comprising:
limiting members of the group to those having a particular medical
15 condition.

67. The method of claim 63 further comprising:
limiting members of the group to those having substantially similar age, sex,
or race.

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68. A method for presenting analysis of a set of personal genomic
profiles, the method comprising:
designating a set of personal genomic profiles;
identifying differences and similarities in the set of personal genomic
25 profiles; and
displaying the differences and similarities in the set of personal genomic
profiles.

69. The method of claim 68 wherein the displaying generates a web page
30 for viewing by participant who has provided information for a personal genomic
profile in the set.

70. A method for building a genomic profile information database, the method comprising:

responsive to the request of an individual human being, adding a personal genomic profile for the individual human being to the database;

5 receiving a request to provide a collection of information comprising the personal genomic profile to a requestor in exchange for payment;

responsive to the request to provide a collection of information comprising the personal genomic profile, providing an anonymous version of the personal genomic profile from the database to the requestor in exchange for payment; and

10 based on having provided the anonymous personal genomic profile to the requestor, compensating the individual human being for having added the personal genomic profile via the payment.

71. A method for providing a service to a remote customer, the method comprising:

obtaining a personal genomic profile of the customer;

pooling the profile with other profiles;

selling the pool; and

passing compensation back to the customer.

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72. A method for providing a service to a remote customer, the method comprising:

obtaining a personal genomic profile of the customer;

pooling the profile with other profiles;

25 over a computer network connection, providing the customer with tools to compare the profile with other profiles in the pool.

73. A method of providing a personal genomic information service to a participant, the method comprising:

obtaining information and a biological sample from the participant to generate a personal genomic profile; and

5 granting the participant the ability to perform custodial functions on the profile.

74. The method of claim 73 wherein the custodial functions comprise: selling the personal genomic profile.

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75. The method of claim 73 wherein the custodial functions comprise: comparing the personal genomic profile with personal genomic profiles of other participants.

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76. The method of claim 73 wherein the custodial functions comprise: sharing an anonymous version of the personal genomic profile with other participants.

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77. A method comprising:
signing a contract over the Internet establishing ownership of personal genomic profile information.

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78. A method comprising:
accepting a contract signature over the Internet establishing ownership of personal genomic profile information.

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79. A method of acquiring personal genomic profile information for use in a research study, the method comprising:

offering payment for a collection of anonymous genomic profiles.

80. A method of selling personal genomic profile information, the method comprising:

offering an anonymous version of one's personal genomic profile in exchange for payment.

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81. A method of selling personal genomic profile information, the method comprising:

providing an anonymous version of one's personal genomic profile to be pooled with the personal genomic profile of others;

10 authorizing via a computer user interface over a communications network a sale of the pooled personal genomic profile in exchange for payment; and
accepting a portion of the payment.

82. A method of selling personal genomic profile information, the method comprising:

15 in exchange for payment, contributing an anonymous version of one's personal genomic profile to a pool to be sold in exchange for payment.

83. A method of providing a genomic profile information clearinghouse, the method comprising:

20 establishing a trust relationship with an individual;
at the direction of the individual, accepting personal genomic profile information about the individual;
conducting a sale of the personal genomic profile information about the
25 individual to a third party; and
paying the individual from proceeds of the sale.

84. A method of providing a genomic profile information clearinghouse, the method comprising:

- receiving personal genomic profile information from an individual;
- providing the genomic profile information to a third party in exchange for
- 5 payment; and
- providing a portion of the payment to the individual.

85. A method of providing a genomic profile information clearinghouse, the method comprising:

- 10 receiving personal genomic profile information from an individual;
- combining the personal genomic profile information into a pool of genomic profile information;
- providing the pool to a third party in exchange for payment; and
- providing a portion of the payment to the individual.

86. A method of presenting information from a genomic profile information database having a plurality of entries for a plurality of persons, wherein the entries indicate traits of the persons, the method comprising:

- finding persons having common traits in the database;
- 20 displaying a graphical representation of the persons having common traits,
- wherein identities of the plurality of persons remains anonymous.

87. A computer-readable medium having computer-executable instructions for performing the following:

- 25 receiving personal genomic profile information for an individual;
- adding the personal genomic profile information to a database;
- retrieving a pool of information from the database;
- receiving an indication that the pool of information has been sold; and
- responsive to receiving the indication, recording compensation data
- 30 indicating the individual is to be compensated.

88. The computer-readable medium of claim 87 wherein receiving the profile information comprises receiving the profile information over a computer network connection.

5 89. The computer-readable medium of claim 88 wherein receiving the profile information comprises receiving the profile information from a remote laboratory.

10 90. The computer-readable medium of claim 87 wherein the indication is received over a computer network connection.

15 91. The computer-readable medium of claim 87 wherein the pool of information from the database is a set of personal genomic profiles having specified criteria.

20 92. The computer-readable medium of claim 91 further comprising computer-readable instructions for performing the following:
receiving the specified criteria from a researcher; and
presenting a number of individuals meeting the criteria to the researcher.

25 93. A genomic profile information center comprising:
a collection of personal genomic profiles for a plurality of participants; and
tools for comparing the personal genomic profiles with a genomic profile of a particular participant.

94. A genomic profile information center comprising:
means for collecting personal genomic profiles from a plurality of
participants;
means for pooling the personal genomic profiles into a collection of personal
5 genomic profiles; and
means for recording compensation due to a participant as a result of having
sold the collection to a requesting entity.

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